

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

**REPORT OF EXAMINATION**

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

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Surface Water

(Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

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Ground Water

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE

May 25, 1989

APPLICATION NUMBER

G2-27557

PERMIT NUMBER

CERTIFICATE NUMBER

NAME

Clark Public Utilities

ADDRESS (STREET)

Post Office Box 8900

(CITY)

Vancouver

(STATE)

Washington

(ZIP CODE)

98668

**PUBLIC WATERS TO BE APPROPRIATED**

SOURCE

Well No. 109

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND

MAXIMUM GALLONS PER MINUTE

300

MAXIMUM ACRE-FEET PER YEAR

242

QUANTITY, TYPE OF USE, PERIOD OF USE

242 acre-feet per year

Municipal supply

Year-round, as needed

**LOCATION OF DIVERSION/WITHDRAWAL**

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL

373 feet south and 999 feet east of the north quarter corner of Section 29.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)

NW $\frac{1}{4}$ NE $\frac{1}{4}$

SECTION

29

TOWNSHIP N.

4

RANGE, (E. OR W.) W.M.

3E

W.R.I.A.

28

COUNTY

Clark

**RECORDED PLATTED PROPERTY**

LOT

BLOCK

OF (GIVE NAME OF PLAT OR ADDITION)

**LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED**

Area served by Clark Public Utilities.

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**DESCRIPTION OF PROPOSED WORKS**

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An 8" x 140' well capable of producing 300 gpm.

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**DEVELOPMENT SCHEDULE**

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BEGIN PROJECT BY THIS DATE:

Started

COMPLETE PROJECT BY THIS DATE:

Complete

WATER PUT TO FULL USE BY THIS DATE:

February 1, 1994

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**REPORT**

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**BACKGROUND:**

On May 25, 1989, Clark Public Utilities (CPU) applied to the Department of Ecology for a permit under the provisions of Chapter 90.44 Revised Code of Washington (RCW), to appropriate public ground water from a well in the amount of 300 gallons per minute (gpm) for municipal supply. The application was accepted for processing and assigned application number G2-27557.

A legal notice of the applicant's proposed appropriation was duly published. No objections were received in response to the public notice. However, the Washington Departments of Fisheries and Wildlife submitted written comments on the application, expressing concerns about potential impacts on instream flows in Salmon Creek.

These findings are being issued concurrently with findings on the following CPU applications:

G2-27152 (Well 108)  
G2-27270 (Well 20)  
G2-27556 (Lang)  
G2-27715 (Well 90-01)  
G2-27736 (Well 90-02)  
G2-27753 (Well 90-03)  
G2-27953 (Well 21)  
G2-27980 (Well 91-02)

**INVESTIGATIONS:**

The subject application and accompanying information were reviewed along with pertinent State records such as well drilling reports, recorded water rights, and correspondence from the Departments of Fisheries and Wildlife. Background information was obtained from Geology and Ground Water Conditions of Clark County Washington, with a Description of a Major Alluvial Aquifer Along the Columbia River (M. J. Mundorff, United States Geological Survey, 1964); Ground Water Management and Development Plan (prepared for Clark P.U.D. by J. R. Carr/Associates, 1985); and other sources.

As a result of these investigations, the following is reported:

The subject well is located on property owned by Michael and Catherine Achen, approximately four miles northeast of Battle Ground, Washington, at an elevation of about 560 feet msl. The well is within 250 feet west of Rock Creek, a Salmon Creek tributary. Certificate No. 1475-A, dating from 1952, was issued for this well for irrigation of 20 acres (200 gpm, 40 acre-feet per year).

A well report on file in this office shows that the well was completed in February 1953 in "solid rock" at a depth of 140 feet below ground surface, with an 8-inch casing to 53 feet. The static water level was measured at 56 feet when the well was drilled. A later report (Carr/Associates, October 21, 1988) shows the static water level was 71.74 feet on August 18, 1988. Based on a 24-hour pump test performed on that date, Carr/Associates' permanent pump recommendations were for a discharge rate of 300 gpm.

Senior ground water rights. There are two recorded ground water rights for wells within one mile of the subject well. Well logs on file in this office show that there are at least 12 pre-existing wells within one quarter mile of the subject well. Most of these are for single domestic use and have relatively low yields (.5 to 10 gpm).



Surface water. The hydrology of the Salmon Creek Basin has been studied at the regional scale by M.J. Mundorff, Carr and Associates, and the U.S. Geological Survey (USGS), among others. Analysis of past studies yields the following general information about the basin:

- Salmon Creek flows are derived entirely from local precipitation runoff and ground water discharge through seeps and springs.
- There is hydraulic communication between Salmon Creek and the shallow aquifers which discharge and are recharged from it.
- Recharge to the basin's shallow aquifers ultimately discharges as base flow in Salmon Creek.

Consumptive withdrawal of water from the shallow aquifers, as proposed by CPU, will necessarily result in a commensurate change in some other part of the basin hydrology. This water must be derived from some combination of aquifer storage, increased recharge, or decreases in natural discharge to streams and springs.

Because of low flow conditions in the dry season, the Department of Fisheries (WDF) has recommended since 1949 against new appropriations that would further reduce Salmon Creek low flows. In written comments regarding the subject application, WDF stated its concern that further ground water withdrawals in the Salmon Creek basin would reduce the already limited coho salmon rearing habitat, by depleting summer stream flows.

In its written comments, the Department of Wildlife stated that low summer stream flows are a major limiting factor for fish production in the Salmon Creek basin, and that the agency "would not want any well pumping that reduces stream flow during May - October."

In addition, there are senior rights on Salmon Creek and its tributaries, several of which carry provisions preventing diversion of water when stream flows drop below certain low-flow thresholds.

Clark County Reservation. Under the provisions of Chapter 173-592 WAC, Reservation of Future Public Water Supply for Clark County, ground water was reserved for future beneficial use for public water supply in Clark County. The reserved ground waters were intended to be appropriated from the following aquifers, as identified in WAC 173-592-070 (5):

- 1A Columbia River Alluvium (CRA)
- 1B-2B Upper Troutdale Aquifer (UT)
- 1C Sandy River Mudstone (SRM)

The above aquifers, as numbered in Ground Water Management and Development Plan prepared for CPU (Carr/Associates, 1985), are all composed of unconsolidated or cemented sands and gravels, and are generally found in areas west of the Cascade foothills in Clark County. The subject well was completed in fractured consolidated rock extending from 87 to 140 feet below ground surface. Such formations, designated "4C" in the above-referenced plan, are not included in WAC 173-592-070(5). Therefore the subject appropriation does not fall under the Clark County Reservation, and will not carry the August 13, 1986, priority date of the Reservation.

Summary of existing CPU rights. The total primary allocation available to CPU (Clark Public Utility District plus Hockinson Water Association) under existing certificates is 8,846 AF/Y and 12,558 gpm, with 6,528 AF/Y issued as supplemental rights. The total annual withdrawal authorized by the above rights is 8,846 AF (For a complete listing of CPU's existing water rights, see the report of examination for Application No. G2-27152).

Water requirement. The 1991 Clark County Coordinated Water System Plan Update forecasts an annual water demand of 513,688,900 cubic feet (approximately 11,793 AF/Y) for the CPU system in the year 2010, based on serving a projected population of 82,353. An increase of 2,947 AF/Y, in addition to CPU's existing rights for 8,846 AF/Y, is required to meet the projected 2010 demand. Therefore the permit for the subject well will be for new "primary" acre feet, increasing the total annual quantities authorized for CPU.

Based on pumping 300 gpm 12 hours per day, the subject well can produce 242 AF/Y; the permit will authorize that annual quantity. The applicant should understand that said quantities may be reduced at the time of issuance of a final water right certificate, to reflect the actual production capacity of the subject well.



Memorandum of Understanding. A Memorandum of Understanding (MOU) between Ecology, Clark County, and Clark Public Utilities has been developed (attached and incorporated). The purpose of the MOU is to design and implement a Water Resource Plan (WRP) for the Salmon Creek Basin.

The objective of the WRP is to develop, through a cooperative process, a management plan for ground and surface waters in the Salmon Creek Basin. The WRP study process and recommended plan will be used by Ecology as technical and management criteria for water allocation decisions in the Salmon Creek Basin to protect base or minimum flows and to develop options to manage and enhance instream values.

The WRP study team will be comprised of representatives from Clark County Government, Clark Public Utilities, Department of Ecology, and Department of Health.

Conservation program. Under RCW 90.03.005 and 90.54.020(6), the Department of Ecology must reduce the waste of water as far as practicable, and must emphasize conservation and water use efficiency in management of the state's water resources. Accordingly, the above-referenced MOU provides for implementation of an aggressive conservation plan by CPU.

#### CONCLUSIONS:

In accordance with Chapters 90.03 and 90.44 RCW, the Department of Ecology finds that the proposed appropriation is for a beneficial use; and that, under the provisions of the January 15, 1992, Memorandum of Understanding between Clark County, Clark Public Utilities, and Ecology (attached and incorporated), water is available from the source in question, the appropriation will not impair senior rights, and will not be detrimental to the public welfare.

#### RECOMMENDATIONS:

Based on the above conclusions of the Department of Ecology, it is recommended that this application be approved and a permit be issued to allow appropriation of 300 gpm from this well for municipal supply. The quantity withdrawn shall not exceed 242 acre-feet per year.

The permit shall be subject to existing senior rights, and shall carry the following provisions:

This permit incorporates and is issued subject to the January 15, 1992, Memorandum of Understanding (MOU) between Clark County, Clark Public Utilities, and the Department of Ecology. The MOU provides for assessment of water availability and impact to senior rights for this permit, in accordance with the Water Resources Plan to be completed under the MOU.

This permit is subject to the implementation of the requirements established in the Interim Guidelines for Public Water systems Regarding Water Use Reporting, Demand Forecasting Methodology and Conservation Programs, July 1990.

The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a permit by this department for appropriation of the waters in question does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtainment of such right is a private matter between applicant and owner(s) of that land.

An approved metering device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through -040 (installation, operation, and maintenance requirements are attached). Meter readings shall be recorded at least monthly.

Installation and maintenance of an access port as described in WAC 173-160-355 is required. An air line and gauge may be installed in addition to the access port. Water levels shall be measured and recorded using a consistent methodology, in accordance with accepted industry standards. Such measurements shall be made at least monthly. The length of the pumping period or recovery period prior to each measurement shall be constant, and shall be included in the record.

Under RCW 90.44.250 and 90.54.030, the Department of Ecology is directed to become informed as to all phases of the water resources of the state, and is authorized to make such investigations as may be necessary to determine the location, extent, depth, volume, and flow of all ground waters within the state. Accordingly, a summary of the previous year's monthly water level data and monthly totals of water pumped for this well, shall be submitted to Ecology's Southwest Regional Office annually during the month of February, or more frequently if requested by Ecology.



Report Continued

The use of the waters to be appropriated under this application will be for a public water supply. The State Board of Health rules require every owner of a public water supply to obtain written approval from the Office of Water Supply, Department of Health, Mail Stop LD-11, Building 3, Olympia, Washington 98504, prior to any new construction or alterations of a public water supply.

REPORTED BY: Unnie Wright DATE: March 16, 1992

The statutory permit fee for this application is \$20.00.

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